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Bosshard, Georg ; Zellweger, Ueli ; Bopp, Matthias ; Schmid, Margareta ; Hurst, Samia A ; Puhan, Milo A ; Faisst, Karin

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Letters

RESEARCH LETTER

Medical End-of-Life Practices in Switzerland: A Comparison of 2001 and 2013

Physician-assisted suicide, but not euthanasia, is legal in Switzerland.¹ The Netherlands and Belgium, where euthanasia is legal, regularly monitor the incidence of medical end-of-life practices.^{2,3} As part of a study in 6 European countries, reliable data on medical end-of-life practices were collected in the German-speaking part of Switzerland in 2001.⁴ To assess trends in physician-assisted suicide and other medical end-of-life practices, we conducted an identical study in Switzerland in 2013.

Methods | A detailed description of the methods used in our study has been published elsewhere.^{2,4} On the basis of a random sample of death certificates in the German-speaking part

of Switzerland (containing 70% of the country's total 8.1 million residents and the major cities of Zurich, Basel, and Bern) filed between August 2013 and January 2014, we mailed 4998 questionnaires to the decedents' attending physicians under conditions of strict anonymity, of which 3173 (63.5%) were returned. All data from 2001 and 2013 were weighted to adjust for age- and sex-related differences in response rates and were age-standardized to the age distribution of Swiss residents at death in 2013. Two-sided *P* values for the comparison of 2001 and 2013 data were calculated using the Pearson χ^2 test for 2-way contingency tables (STATA survey tables for weighted data; STATACorp LP).

Results | In 2013, a total of 71.4% of all deaths in our study population from the German-speaking part of Switzerland were non-sudden and expected and therefore eligible for end-of-life decisions. In 58.7% of all sampled deaths, at least 1 end-of-life decision was made, compared with a corresponding 52.0% in 2001 (*P* < .001) (Table).

Table. Frequency of Medical End-of-Life Practices in the German-Speaking Part of Switzerland, 2001 and 2013

Characteristic	Values ^a		<i>P</i> Value
	2001 ^b	2013	
Sampled cases, No.	4991	4998	
Studied cases (response rate), No. (%)	3355 (67.2)	3173 (63.5)	
Nonsudden, expected deaths	69.9 (68.3-71.4)	71.4 (69.8-72.9)	.19
Deaths preceded by at least 1 end-of-life practice ^c	52.0 (50.3-53.8)	58.7 (57.0-60.4)	<.001
Forgoing life-prolonging treatment ^d	28.7 (27.2-30.4)	35.2 (33.6-36.9)	<.001
Intensified alleviation of symptoms ^e	22.3 (20.9-23.8)	21.3 (19.9-22.7)	.31
Physician-assisted death	1.0 (0.7-1.4)	2.2 (1.8-2.8)	<.001
Assisted suicide ^f	0.3 (0.2-0.5)	1.1 (0.8-1.5)	<.001
Euthanasia ^g	0.2 (0.1-0.5)	0.3 (0.2-0.6)	.41
Ending of life without the patient's explicit request ^h	0.5 (0.3-0.8)	0.8 (0.5-1.2)	.08
Continuous deep sedation until death ⁱ	4.7 (4.0-5.4)	17.5 (16.2-18.8)	<.001
Without end-of-life decision	0.9 (0.6-1.3)	1.2 (0.9-1.6)	.26
Combined with			
Forgoing life-prolonging treatment	2.0 (1.6-2.6)	10.9 (9.8-12.0)	<.001
Intensified alleviation of symptoms	1.6 (1.2-2.1)	4.9 (4.1-5.7)	<.001
Physician-assisted death	0.1 (0.1-0.3)	0.5 (0.3-0.9)	.005

^a Data are presented as percentage (95% CI) unless otherwise noted.

^b Data for 2001 are age standardized to 2013. This may entail slight differences to previously published figures.

^c All data regarding these practices are weighted percentages (95% CIs) of all studied cases.

^d Affirmative answer to the question, "Did you or another physician withhold or withdraw a medical treatment while taking into account the possible hastening of death?"

^e Affirmative answer to the question, "Did you or another physician intensify the alleviation of pain and/or symptoms while taking into account the possible hastening of death?"

^f Affirmative answer to the question, "Was death the consequence of the use of a drug that was prescribed or supplied by you or another physician with the

explicit intention of enabling the patient to end his or her life?"

^g Affirmative answer to the question, "Was death the consequence of the use of a drug that was administered by you or another physician with the explicit intention of hastening the patient's death?" AND affirmative answer to the question, "Was this decision made at the explicit request of the patient?"

^h Affirmative answer to the question, "Was death the consequence of the use of a drug that was administered by you or another physician with the explicit intention of hastening the patient's death?" AND negative answer to the question, "Was this decision made at the explicit request of the patient?"

ⁱ Affirmative answer to the question, "Did the patient receive drugs, such as benzodiazepines and/or other sedative substances, to keep him or her in deep sedation or coma until death?"

The percentage of deaths in which life-prolonging treatment was forgone increased from 28.7% of all deaths in 2001 to 35.2% of all deaths in 2013 ($P < .001$). The percentage of deaths that were preceded by intensified alleviation of pain and symptoms remained stable (22.3% in 2001 vs 21.3% in 2013).

Physician-assisted death increased from 1.0% in 2001 to 2.2% in 2013 ($P < .001$), with assisted suicide increasing in the same period from 0.3% to 1.1% ($P < .001$). Euthanasia and ending of life without the patient's explicit request also increased, but the number of studied cases of the 2 categories was small, at 8 and 15 cases in 2001, and at 11 and 25 cases in 2013, respectively, and the increases, from 0.2% to 0.3% for euthanasia and from 0.5% to 0.8% for ending of life without the patient's explicit request, were not significant.

The greatest increase was in the use of continuous deep sedation until death, which rose from 4.7% of all deaths in 2001 to 17.5% in 2013 ($P < .001$). Sedation was combined with forgoing life-prolonging treatment, alleviation of pain and symptoms, or physician-assisted death in 62%, 28%, and 3% of cases, respectively.

Discussion | In Switzerland in 2013, more than 4 of 5 non-sudden deaths, corresponding to 58.7% of all deaths, were preceded by at least 1 specific end-of-life practice in 2013 compared with 52.0% in 2001. Similar increases in medical end-of-life practices were reported in the Netherlands, from 43.8% in 2001 to 57.8% in 2010, and in Belgium, from 38.4% in 2001 to 47.8% in 2013.^{2,3}

Forgoing life-prolonging treatment and intensified alleviation of pain and symptoms constitute the vast majority of medical end-of-life practices. In Switzerland, an increase in the percentage of deaths in which life-prolonging treatment was forgone predominated among medical end-of-life practices. This trend contrasts with the situation in the Netherlands, where forgoing life-prolonging treatment decreased slightly, from 20.2% in 2001 to 18.2% in 2010, and intensified alleviation of symptoms increased from 20.1% in 2001 to 36.4% in 2010.²

In Switzerland, physician-assisted death occurs mainly as assisted suicide. We were unable to establish how many such deaths involved foreigners without permanent residence in Switzerland.⁵ The trends in euthanasia and ending of life without the patient's explicit request, both of which are illegal in Switzerland, reflected small absolute differences in numbers for these 2 practices from 2001 to 2013 and are difficult to interpret.

In our study population, the substantial increase in the use of continuous deep sedation until death, from 4.7% of all

deaths in 2001 to 17.5% in 2013, is noteworthy; this practice was therefore more common in Switzerland than in either Belgium (12.0% in 2013) or the Netherlands (12.3% in 2010).^{2,3} In 2005, the Swiss Association of Palliative Care released specific guidelines on palliative sedation.⁶ These guidelines may have stimulated both awareness of palliative sedation and the practice itself.

Georg Bosshard, MD
Ueli Zellweger, MSc
Matthias Bopp, PhD
Margareta Schmid, MD
Samia A. Hurst, MD
Milo A. Puhon, MD, PhD
Karin Faisst, MD

Author Affiliations: Clinic for Geriatric Medicine, Zurich University Hospital, and Center on Aging and Mobility, University of Zurich and City Hospital Waid, Zurich, Switzerland (Bosshard); Epidemiology, Biostatistics and Prevention Institute, University of Zurich, Zurich, Switzerland (Zellweger, Bopp, Schmid, Puhon, Faisst); Institute for Ethics, History, and the Humanities, Geneva University Medical School, Geneva, Switzerland (Hurst).

Corresponding Author: Ueli Zellweger, MSc, Epidemiology, Biostatistics and Prevention Institute, University of Zurich, Hirschengraben 84, CH-8001 Zurich, Switzerland (uzellweg@ifspm.uzh.ch).

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